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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,668	12/29/2000	Ali N. Saleh	M-7165-5P US	7626

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ART UNIT	PAPER NUMBER
2662	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/750,668	SALEH ET AL.
	Examiner	Art Unit
	Hanh Nguyen	2662

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Response filed on 9/14/05*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-145* is/are pending in the application.
    4a) Of the above claim(s) *47-112* is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-46 and 113-145* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date *7/5/01,9/29/03,*.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____ .

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 113 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 14 and 16 of U.S. Patent No. 6,856,627 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1 and 113 of the instant application broaden the scope of claims 1, 14 and 16 of the patent by omitting the steps of identifying the first node and the second node; sending a reply message in reply to the message sent over the intermediate links. It has been believed receiving a reply message in response to the step of broadcasting resource request packets to a plurality of nodes in the optical network in the application is well-known in the art.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-21, 27, 32, 40, 123-125, 130, 133 and 141 are rejected under 35 U.S.C. 112,

second paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

In claims 17 and 123, it is not clearly stated "if the failure did not occur at a physical port

of the linkbetween the first node and one of adjacent nodes of the first node, changing a state of

the virtual path to restoring". Claims 18-21, 124, 125 are rejected because they depend on

claims 17 and 123.

In claims 27, 32, 40 and 141, it is not clearly stated "if the response to the restoration

request is not received within the predefined threshold times, releasing resources of the virtual

path".

Claims 28, 29 are rejected because they depend on claim 27.

Claims 41, 42 are rejected because they depend on claim 40.

In claim 130, it is not clearly stated " if the response to the restoration request is not

received within the predefined threshold times, releasing resources of the VP".

In claims 32 and 133, it is not clearly stated "if the timer expires before the forwarded

message is received, releasing resources of the VP".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.

Claims 1-26, 28-31, 33-39, 41-46, 113-129, 131, 132, 134-140, 142-145 are rejected

under 35 USC 103(a) as being unpatentable over Kawabata et al. (Pat. 6,665,263 B1) in view of

Chaudhuri (US pat. 6324162 B1).

In claims 1 and 113, Kawabata et al. teaches a method for restoring a physical path in an

optical network (see Abstract and Fig.4), the method comprising broadcasting a plurality of

resource request packets to a plurality of nodes in the optical network (fig.4, node 101 sends a

switch request message 131 toward nodes 104, 103, col.1, lines 55-60); identifying a plurality of

nodes with resources necessary to support the virtual path (fig.4, a response message 132 sent

from node 103 back to node 101 notifies required bandwidth has been allocated to node 104 to

support stanby virtual path 122, col.2, lines 3-7& lines 45-50), determining an alternate physical

path comprising ones of the nodes with resources (fig.4, physical links 113, 114 comprising

node 104), restoring the virtual path by provisioning the virtual path over the alternate physical

path (standby virtual by 122 is provided over physical links 113, 114, see col.2, lines 7-12).

Kawabata does not disclose configuring the alternate physical path by establishing a

communication connection between the ones of the nodes with resources.

Chaudhuri discloses a path restoration method in optical network (see fig.3) wherein

another physical path connecting nodes 12E, 12F, 12G and 12D is established when an optical

link 14_9 is failed (see col.7, line 58 to col.8, line 40). Therefore, it would have been obvious to

one ordinary skilled in the art to apply the teaching of Chaudhuri in order to configure an

alternate physical connection into Kawabata et al. and restore the failed virtual path over the

alternate physical path. The motivation is to reestablish virtual connection between first node

and second node.

In claims 2 and 114, Kawabata discloses detecting a failure in the virtual path (fig.5,

receiving circuit 201 receives an alarm massge, col.1, lines 55-58& col.2, lines 20-25).

In claims 3 and 115, Kawabata discloses the failure detection is done by receiving a

failure message packet (receiving an alarm message, col.2, lines 20-25); the identification of the

nodes with resources is done by acknowledging the failure message packet (fig.5, element 204

references table 251 to allocate required nodes resources in response to receiving the alarm

message, col.2, lines 45-50); and the determination of the nodes with resources is done by

analzing a response to the resource request packets (fig.5, in response to receiving response

message 292, sending circuit 202 sends a switch message to another node, col.2, lines 20-25).

In claims 4 and 116, the limitations of these claims have been addressed in claim 1.

In claims 5, 6 and 117, the limitations of these claims have been addressed in claim 1.

In claims 10, 22, 36, 118, 126 and 137, Kawabata discloses means for restoring the VP is

included in the first node (fig.5, ATM node 200 includes a restore allocation circuit 204 which

allocates resources required for VP, col.2, lines 45-50 & lines 60-65); restoration is performed in

intermediate node (fig.5, node 200, col.2, lines 12-50); and restoration is performed by a second

node (fig.5, node 103, col.3, lines 1-5).

In claims 7-9, Kawabata does not disclose the restoration of the VP is completed in less

than 2ms, 250 miliseconds, 50 milisecseconds. Chaudhuri discloses time required to determine

available restoration channels is 20-30 miliseconds and the complete switching time is less than

60 miliseconds. Therefore, it would have been obvious to one ordinary skilled in the art to

restore the VP in less than 2 miliseconds, 250 miliseconds, 50 miliseconds as requirement

needed in the design system.

In claim 23, Kawabata does not disclose the failure is a local physical port failure

between the intermediate node and an adjacent node. Chaudhuri discloses, in fig.3, a failure of

channel 14_9 between node 12A and node 12D, wherein the channel 14_9 is associated with ports

connecting nodes 12A, 12D (the failure is a local physical port failure between the intermediate

node and an adjacent node). See col.6, lines 20-30. Therefore, it would have been obvious to one

ordinary skilled in the art combine the teaching of Chaudhuri with that of Kawabata in order to

restore local failure of port connecting nodes by switching from the failed port to another port

within a same link. Network resource can be saved by using another port within the same link.

In claims 11, 24, 37, 119, 127 and 138, Kawabata discloses initiating a physical port

switch request for the adjacent node (fig.4, a switch request message 131 is sent by node 101,

col.1, lines 63-65), provisioning the virtual path to the different physical port (fig.4, a virtual path

122 is switched to connect nodes 101, 104, 103, see col.2, lines 1-12). Kawataba does not

disclose if the failure is a local physical port failure between said second node and an adjacent

node comprising the virtual path, determining an available different physical port of the link

between the second node and the adjacent nodes, and updating the provisioning information in a

node database. Chaudhuri disclose if the failure is a local physical port failure (fig.3, the failure

of channel 14_9) between second node (fig.3, node 12D) and an adjacent node (fig.3, node 12A)

comprising the virtual path (see col.6, lines 20-30); determining an available different physical

port of the link between the second node and the adjacent nodes (fig.3, node 12A checks for the

availability of a restoration channel 18 connecting nodes 12D (second node) and 12A, wherein

channel 18 is associated with ports connecting nodes 12D, 12A (see col.6, lines 35-45); updating

the provisioning information in a node database (fig.2, database 26 updates changes such as

setup, removal of a path or unavailability of a restoration channel, compute alternate restoration

paths between endpoint nodes, col.4, lines 5-22). Therefore, it would have been obvious to one

ordinary skilled in the art to combine the teachings of Chaudhuri with that of Kawabata in order

to obtain claimed invention and update status of VPs in the system.

In claims 34, 45, 135 and 144, Kawabata discloses means (fig.5, resource allocation

circuit 204), if the second node receives a valid restore path request (fig.4, node 103 receives

switching request message 131), and allocating resources requested for the virtual path (fig.5,

resource allocation circuit 204 allocates resouces to required nodes). See col.2, lines 45-50.

Chaudhuri has discloses the step of updating path information in a node database in claim 37.

Therefore, it would have been obvious to one ordinary skilled in the art to combine the teachings

of Chaudhuri with that of Kawabata in order to obtain claimed invention and update status of

VPs in the system.

In claims 35, 46, 136 and 145, Kawabata discloses, in fig.5, resource allocation circuit

204 allocating resources to required nodes upon receiving the switch request 131, but does not

disclose means, if said second node receives an invalid restore path request, for responding with

a negative acknowledgment. It is a well-known skills in the art for a second node to response a

negative acknowledgement if the second node does not have enough resources.

In claims 17 and 123, Most of the limitations of these claims have been addressed in

claim 1, except changing state of VP to restoring and waiting for a response for a first

predetermined time interval. Chaudhuri discloses database 26 that update changes in the network

including setup, removal of VP, compute alternate VP (col.4, lines 5-20). The step of waiting for

a response is well-known in the art. Therefore, it would have been obvious to one ordinary

skilled in the art to combine the teachings of Chaudhuri with that of Kawabata in order to arrive

the claimed invention.

In claims 12, 13, 18, 26, 25, 38, 39, 120, 121, 124, 128, 129, 139 and 140, Most of

limitations of theses claims have been addressed in claim 1, except changing the state of Vp to

restoring; waiting for a response for the path restoration request for a first predetermined time, a

second predetermined of time. Chaudhuri discloses, in fig.3, database 26 that update changes in

the network including setup, removal of VP, compute alternate VP (col.4, lines 5-20). The step

of waiting for a response in a predetermined of time is well-known in the art. Therefore, it would

have been obvious to one ordinary skilled in the art to combine the teachings of Chaudhuri with

that of kawabata in order to determine whether a response has been received by waiting for a

predetermined period of time.

In claims 14, 19, 122 and 125, In fig.5 of Kawabata, an alarm message is received at

node101 (see col.2, lines 20-25) (if the response is not receive in within said second

predetermined time interval, generating network alarms).

In claims 31 and 132, most of limitations of theses claims have been addressed in claim

1 by Kawabata., except changing a state of VP to down; and initiating a timer for receiving a

response to the forwarded message. Chaudhuri discloses, in fig.2, a database 26 that updates VP

changes in network which inherently includes statuses of VPs (col.4, lines 5-20). Initiating a

timer for receiving a response to the forwarded message is well-known in the art. Therefore, it

would have been obvious to one ordinary skilled in the art to combine the teaching of Chaudhuri

and that of Kawabata in order to update the status of VP in the network and configure alternate VP when a link is failed.

In claims 30, 33, 43, 131, 134 and 142, the limitations of these claims have been addressed in claim 1.

In claims 15, 16, 20, 21, 28, 29, 41 and 42, neither Kawabata nor Chaudhuri disclose the first and second predetermined time intervals are defined during provisioning of VP; and dynamically calculated by the network based on network traffic condition. Predeterming time intervals dynamically based upon network condition is well-known in the art since there are priority levels of messages transmitted through network.

In claim 44, 143, most of the limitations of these claims have been addressed in claim 1, except changing a state of the VP to down. Chaudhuri discloses, in fig.2, a database 26 that updates VP changes in network which inherently includes statuses of VPs (col.4, lines 5-20). Therefore, it would have been obvious to one ordinary skilled in the art to combine the teachings of Chaudhuri with that of Kawabata in order to update the current status of VPs in the network and configure alternate VP to restore the VP.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
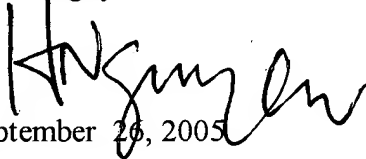
Graham et al. (Pat. 6,097,722);

Crawley et al. (Pat. 5,995,503); and Stone (Pat. 6,041,057)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-FRiday from 8AM to 5PM. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on 571 272 3088. The fax phone number for the organization where this application or proceeding is assigned is 5712738300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen

September 26, 2005

HANH NGUYEN
PRIMARY EXAMINER